

REMARKS

This Amendment and Response are submitted in response to a non-final Office Action mailed on November 1, 2004.

Claims 1-11, 19, 21, 27, 29, 35, and 37 have been canceled without prejudice or admission. Claim 12 has been amended to (1) include the limitations of cancelled claim 1 and (2) limit the claim to an isolated nucleic acid encoding a truncated α -crystallin protein that forms an aggregate having a mass of approximately 60,000 Daltons. Support for this amendment can be found on page 45, lines 14-19 and on page 13, lines 12-19 of the specification. Claim 13 has been amended to include the limitations of cancelled claim 4, as requested by the Examiner. Claims 14-17 have been amended to define precisely the term "stringent conditions." Support for these amendments can be found on page 24, lines 8-11 of the specification. Claims 14 and 15 have also been amended to depend on claims 12 and 13, respectively, thereby removing dependency from cancelled claims. Additionally, claims 16 and 17 have been amended to remove a reference to a figure which is redundant in light of the claim reciting SEQ ID NO:2.

Claims 18, 26, and 34 have been amended to include (1) the limitations of cancelled claims 19 and 21, 27 and 29, and 35 and 37, respectively; and (2) the limitation of a truncated α -crystallin protein that forms an aggregate having a mass of approximately 60,000 Daltons. Support for these amendments can be found on page 45, lines 14-19 and on page 13, lines 12-19 of the specification. Claims 20, 22, 24, 25, 28, 30, 32, 36, and 38-40 have been amended to make them dependent from pending, rather than canceled, claims.

New claims 42-47 are identical to claims 12, 14, 16, 18, 26, and 34 except that these claims are limited to nucleic acids that encode for a "truncated polypeptide that retains the ability of the wild-type protein to prevent protein aggregation," instead of a truncated polypeptide that forms an aggregate having a mass of approximately 60,000 Daltons. Support for these amendments can be found on page 45, lines 20-22 of the specification and in Figure 8.

New dependent claims 48 and 49 further limit claim 12. Support for these new claims can be found on, for example, page 9, lines 10-13 of the specification.

Thus, with entry of this Amendment, claims 1-11, 19, 21, 27, 29, 35, and 37 are cancelled and claims 12-18, 20, 22-26, 28, 30-34, 36, and 38-49 are pending (of which claims 18, 20, 22-26, 28, 30-34, 36, and 38-41 are withdrawn).

Election/Restrictions

The Examiner has acknowledged the Applicant's election of Group II (claims 12-17 directed to isolated nucleic acids encoding truncated α -crystallin polypeptides). Claims 18, 20, 22-26, 28, 30-34, 36, and 38-41 of Group III process claims have been withdrawn from consideration. However, as acknowledged by the Examiner in paragraph 6 of the Restriction Requirement mailed June 17, 2004, should Group II product claims be found allowable, withdrawn Group III process claims which depend from or otherwise include all the limitations of the allowable product claims will be rejoined as a matter of right according to MPEP §821.04.

Applicants would like to respectfully note to the Examiner that claims 18, 26, and 34 have been amended to be consistent with the amendments made to the elected group (claims 12-17), and thus contain all of the limitations of the elected group. Applicant respectfully ask the Examiner to rejoin these non-elected claims and any claims dependent from these claims, if any elected claim is found allowable.

Additionally, applicants respectfully request the Examiner to consider new claims 42-44, 48, and 49, since they are directed to the same invention as the elected group, isolated nucleic acids encoding truncated α -crystallin polypeptides. New claims 45-47 are directed to non-elected group III, however they include all of the limitations of the elected group. Applicants respectfully ask the Examiner also to rejoin these non-elected claims, if any elected claim is found allowable.

theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applies prior art.” *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. Appl. & Inter. 1990) (emphasis in original). Isolated nucleic acids do not necessarily flow from the prior art peptides because nucleic acids and peptides are separate compositions of matter. It is well known to those of skill in the art that possession of an isolated polypeptide does not mean that one has possession of the corresponding nucleic acid, much less the isolated nucleic acid. In view of these points, Kamei does not anticipate the current invention. Accordingly, withdrawal of this rejection is respectfully requested.

Claim Rejection 35 USC §103(a)

Claims 12, 14, and 16 have also been rejected as obvious over Andley *et al.* (*Journal of Biological Chemistry*, 271: 31973-31980 (1996); “Andley”) in view of Kamei. Andley allegedly discloses the cloning, expression, aggregation behavior, and chaperone-like activity of human α A-crystallin and mutants of human α A-crystallin. The Examiner alleges that the nucleic acid sequence disclosed by Andley encoding a human α A-crystallin protein describes the nucleic acid sequence encoding the truncated α A-crystallin protein disclosed in Kamei.

Applicants have amended the claims to render this rejection moot. Elected claims 12, 14, 16 and non-elected claims 18, 26, and 34 have been amended to limit the claims to truncated α -crystallin proteins that form aggregates having a mass of approximately 60,000 Daltons.

At a minimum, Andley teaches that C-terminal truncations or amino acid point mutations (W9F) result in larger or in the same size aggregates, respectively, compared to 540 kDa wild-type aggregates (see pg. 31977 of Andley). Andley does not suggest or teach that truncations could result in smaller aggregates. Applying the teaching of Andley to Kamei would lead a person skilled in the art to conclude that the truncated proteins observed in Kamei would produce larger or the same size aggregates as wild-type aggregates. Taken alone, Kamei does not teach or suggest that the removal of N-terminal amino acids would reduce aggregation. Thus, neither Andley nor Kamei,

